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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/517,999

01/11/2005

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EXAMINER

BOYKIN, TERRESSA M

ART UNIT

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1711

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/517,999	Applicant(s) MATSUMOTO ET AL.	
	Examiner Terressa M. Boykin	Art Unit 1711	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 March 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9, 11 and 13-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9, 11 and 13-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>11-13-6</u> | 6) <input type="checkbox"/> Other: _____ |

Abstract

Applicant is reminded of the proper language and format of an Abstract of the Disclosure.

The abstract should be in narrative form and **limited to a single paragraph** on a separate sheet within the range of 50 to 250 words. The printer will no longer accept Abstracts that are more than 25 lines, regardless of the number of words. The form and legal phraseology often used in patent claims, such as "means" and "said", should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

***Note that the Examiner would be more than happy to speak with the applicants or applicants' representatives to discuss specific matters of concern in hopes to further expedite the prosecution of the case.**

Response to Arguments

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., two distinct components...etc.) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Applicant's explanation on page 27 and 28 is understood and appreciated. However, the claims *as written* may be interpreted differently and not that of which applicants appear to be intending or referring, i.e., two distinct components, as in a

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polymer and a plasticizer having a polylactic acid segment and a polyether segment.

Note that the claim may be read or interpreted like wise as in the US Pub '332 albeit without the polyester moiety. Additionally, the claim may be interpreted to mean a *polymer having two distinct segments (i.e. a polylactic segment and a polyether and in addition to the polymer a separate and distinct plasticizer moiety and vice versa.*

Lastly, applicants previous arguments filed regarding inherency in an anticipatory rejection is duly noted. It is agreed that:

In any event, the Applicants respectfully submit that inherency rejections may only be supported if the disclosure upon which the rejection is based contains sufficient relevant disclosure that the claimed physical characteristic that is inherently present is "necessarily" present. It is not good enough that the claimed physical characteristic might be present, could be present, might possibly be present or even likely to be present. An inherency rejection must be based on physical characteristics that are "necessarily" present.

However, inherency is not "necessarily" present when the "moiety" in question and/or the manipulation of said moiety by various parameters would be obvious to one of ordinary skill in the art to employ optimal conditions to meet the needs of the use thereof. The use of the film in the art of record each employ the various film(s) in similar or the same manner, i.e. in packaging material, tape or base material for an object or bag etc.. Thus, it is a reasonable expectation that such parameters would be obvious to the skilled artisan to select the molecular weights, crystallinity, tensile strength etc. and the amounts and ranges as those claimed. Further, products of identical chemical composition, i.e. film, can not have mutually exclusive properties." A chemical

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composition and its properties are inseparable. Therefore, if the prior art teaches the identical chemical structure, the properties applicant discloses and/or claims are necessarily present. *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990). Thus, it would have been obvious to one of ordinary skill in the art to employ the particular parameters for the film(s) as noted without a showing of unexpected results via an affidavit or further proof via a back to back comparison since such films have been disclosed to be used in the same manner as claimed.

Claim Rejections - 35 USC § 102/103

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1- 9,11,13-15, 16,17 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over US Pub 2002/0198332 see explanation above; or USPub 20020028857 see pages 1- 8.

USPub 20020028857 discloses a compostable and/or degradable polymer composition, comprising: polymer (A) which is a polyesteramide copolymer; polymer (B) which is at least one polymer selected from the group consisting of polyethylene vinyl alcohol, polyvinyl alcohol, polyester, starch, starch derivative, cellulose, polyethylene glycol, chitin, amylose, amylopectin, starch derivatized with ethyleneimine, cellulose derivatized with ethyleneimine, polysaccharides derivatized with ethyleneimine, lignin derivatized with ethyleneimine, farinaceous materials derivatized with ethyleneimine and mixtures thereof; component (C) which is a plasticizer; and component (D) which is a crosslinking agent; wherein the polymer composition comprises 0 to 60 wt % of polymer (B), 0 to 25 wt % of component (C), and 0 to 5 wt % of component (D); wherein all wt % values are based upon the total weight of the polymer composition; and with the proviso that the polymer composition must contain at least one of polymer (B) and component (D).

The compositions of the present invention are also suitable for forming films such as are known in the art, including continuous films, apertured films, including hydroformed films and vacuum formed films, and the like. The films may be processed using conventional procedures for producing films of blended polymers on conventional film making equipment. The present compositions are particularly well-suited for processing by melt extrusion methods.

The number average molecular weight and the hard/soft segment ratio of the polyurethane decreases, the polymers of the blend containing the polyurethane tend to be more compatible. As the number average molecular weight and the hard/soft

segment ratio of the polyurethane increases, the blend containing the polyurethane tends to exhibit better processing, which is believed to be due to an enhancement of the melt strength. The polyurethane may be selected within these guidelines by the skilled artisan to tailor the attributes of the particular urethane as necessary.

The polycaprolactone/polydiene block copolymers of the reference may be prepared having various architectures. For example, an A-B diblock copolymer has a block of polymer A segments coupled to a block of B polymer segments. An A-B-A triblock copolymer has a block of B segments coupled to a block of A segments at each of its terminal ends. $A_n-(A-B)_n$ - multiblock copolymer has alternating sequences of A and B segments where n is a positive integer greater than 1.

The polymers or compositions of the reference are not mechanically limited and provide products that do not suffer from the usual limitations known in the art. For example, it is preferred that films for use in disposable absorbent articles and having a thickness of from about 12 microns to about 75 microns have, at room temperature, a machine direction (MD) tensile modulus from about 10,000 to about 106000 lbs/in.²; a MD tear strength of at least 25 grams per micron of thickness; a cross direction (CD) tear strength of at least 25 grams per 25.4 microns of thickness; and an impact strength of at least 12 cm as measured by falling ball drop; and more preferably also have, at room temperature, a tensile elongation at break of at least about 140% and a tensile strength of at least about 20 MPa. In the context of films, the mechanically limited polymers form films of the above-noted thickness having at least one of these properties outside of the stated ranges.

As noted previously, the reference **USPub 2002/0198332** discloses a poly(lactic acid) polymer composition comprising a poly(lactic acid) polymer exhibiting crystallinity, and a plasticizer, in which the plasticizer has at least one poly(lactic acid) segment

having a molecular weight of 1200 or more per molecule and comprises a polyether and/or polyester segment.

USPub 2002/0198332 disclosed a lactic acid-based resin composition comprising a mixture of (A) a mixture of (a1) polylactic acid and (a2) an aliphatic polyester, and (B) an aliphatic block co -polyester having a polylactic acid segment and an aliphatic polyester segment, wherein the aliphatic block co -polyester (B): *(1) contains a lactic acid component in an amount of from 20 to 80 wt % in terms of monomer, (2) has a weight average molecular weight of 1,000 or more and less than 60,000, and (3) has a weight average molecular weight of the polylactic acid segment of from 500 to 55,000 and a weight average molecular weight of the aliphatic polyester segment of from 500 to 55,000.* The lactic acid-based resin composition of the invention has transparency and flexibility because the respective compositional resins are effectively dispersed. The molded article formed there from is good in molding property, and in particular, a molded article thus stretched, oriented and crystallized, such as a film, a sheet, a filament and the like, has excellent mechanical property and heat resistance in addition to the foregoing properties.

The reference acknowledges that "in the lactic acid-based resin composition, various kinds of additives (a *plasticizer*, an antioxidant, an ultraviolet ray absorbent, a heat stabilizer, a flame-retardant, an internal releasing agent, an inorganic additive, an antistatic agent, a surface wet ability-improving agent, a combustion assistant, a pigment, a lubricant and a natural matter) and the like may be added corresponding to the objects (for example, improvement in moldability, secondary

workability, degradability, tensile strength, heat resistance, storage stability, weather resistance and the like).

With regard to the molecular weights, note that molecular weight (for a polymer) defined by a number only is normally so meaningless as to be indefinite and thus should be defined by one of the standard types (Mw, Mn, etc); if molecular weight is narrowly critical (i.e., necessary to establish patentability) there must be sufficient data to back calculate the property from which the molecular weight was calculated. (In that instance it is generally preferable to define the claimed molecular weight by the property).

With regard to applicants claims 8 and 9, note that the reference discloses specific examples of the aliphatic dihydric alcohol that may be used in the aliphatic polyester in the reference, for example, ethylene glycol, diethylene glycol, triethylene glycol, *polyethylene glycol*, propylene glycol, dipropylene glycol, 1,3-butanediol, 1,4-butanediol, 3-methyl-1,5-pentanediol, 1,6-hexanediol, 1,9-nonanediol, neopentyl glycol, polytetramethylene glycol, 1,4-cyclohexanedimethanol and the like can be exemplified. These may be used solely or in combination of two or more of them.

With regard to claim 11 wherein the composition is being stretched 1.1 times or more in at least one axial direction, the reference discloses in claim 7 "a molded article described in item [6], which is stretched in at least *one direction* by from 1.1 to 15 times"

With regard to applicants claim 12, note claim 8 of the reference disclosed the

formation of a film.

With regard to claim 13 in which the film has a tensile modulus of elasticity of 100 to 1500 MPa and a heat resistance of 120. C. to 230. C., note that the reference discloses that the composition may be made into a molded article that has excellent mechanical property and heat resistance in addition to the foregoing properties.

With regard to claim 14 in which the film has a film haze of 0.2 to 5 percent, note that the reference discloses procedures which produce products having a haze was 20%; a haze of 2.3%; a haze of 6.1% etc.

With regard to claim 16, in which the film is selected from a packaging wrap film, a stretch film, an agricultural film, a film for label, a film for tape, a film for protecting a base material and a film for bag, note that the reference discloses that the lactic acid-based resin composition has transparency and flexibility such that the molded article formed there from is good in molding property, and in particular, a molded article thus stretched, oriented and crystallized, such as a film, a sheet, a filament and the like, is a molded article that has excellent mechanical property and heat resistance in addition to the foregoing properties. Therefore, it can be preferably used as materials of wide ranges, such as *various kinds of packaging materials* for food, electronics, medical use, pharmaceuticals, cosmetics and the like, materials for agriculture, civil engineering and construction, and fishery, a compost material, and the like. When it is discarded after use, it is not accumulated as industrial waste and domestic waste.

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The fact that the reference does not specifically state that no crystallinity exists may be interpreted as inherent since such characteristics of the reference, the process parameters and the use of the product appear to be the same. Any properties or characteristics inherent in the prior art, e.g. acid value, although unobserved, unmentioned or detected by the reference, would still anticipate the claimed invention. Note In re Swinehart, 169 USPQ 226. "It is elementary that the mere recitation of a newly discovered...property, inherently possessed by things in the prior art, does not cause claim drawn to those things ".

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 15, 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over USPub 2002/0198332 see abstract, cols. 1-8 and claims.

Thus, the **USPub 2002/0198332** discloses a stretched film polylactic acid polymer as claimed by applicants except for specifically stating that the film may be used for packaging wrap. However, the characteristics disclosed, i.e. stretching, strength etc. would be advantageous for the use for wrapping an object. It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ the film as a packaging wrap since a film "inherently" covers an object and the films

characteristics would advantageously lend itself as a wrap. Further the reference acknowledges that when "polylactic acid has high rigidity and thus cannot be said that it is a resin suitable for such purposes that require flexibility, such as a film, *a packaging material* and the like" and thus seeks to produce a product to overcome the obstacle, i.e. by forming a molded article formed there from is good in molding property, and in particular, a molded article thus stretched, oriented and crystallized, such as a film, a sheet, a filament and the like, has excellent mechanical property and heat resistance in addition to the foregoing properties. The reference also specifically states that "[it] can be preferably used as materials of wide ranges, such as various kinds of *packaging materials* for food, electronics, medical use, pharmaceuticals, cosmetics and the like, materials for agriculture, civil engineering and construction, and fishery, a compost material, and the like. When it is discarded after use, it is not accumulated as industrial waste and domestic waste.

With regard to claim 15 in which the film has an adhesion of 5 to 30 N/cm.². although the reference does not specifically disclose an adhesion parameter, the reference does disclose that the product may be used as adhesion tape, thus inherently having adhesion properties. Any properties or characteristics inherent in the prior art, e.g. acid value, although unobserved, unmentioned or detected by the reference, would still anticipate the claimed invention. Note In re Swinehart, 169 USPQ 226. "It is elementary that the mere recitation of a newly discovered...property, inherently possessed by things in the prior art, does not cause claim drawn to those things".

Claims 1- 9,11,13-15, 16,17 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP 0980894; or JP 8253665.

As stated above, applicants previous arguments regarding inherency in an anticipatory rejection is duly noted but is considered moot with regard to obviousness.

EP 0980894 discloses a polylactic acid-based resin composition composed of a high molecular ingredient (A) comprising polylactic acid (a1) and an aliphatic polyester (B), and a film, particularly an inflation film, prepared from the resin composition. The film comprising the polylactic acid-based resin composition is biodegradable and excellent in flexibility and resistance to blocking of film and bleeding-out of plasticizer, has no anisotropy in tear strength, and can be suitably used for an agricultural multi-film and garbage bag. When the film of the invention is used for food wrapping, the film prevents fungus growth and contamination of color or odor, and thus can be suitably used.

JP 8253665 discloses an antistatic polylactate composition (I) comprises: (A) polymer mainly composed of lactate unit; and (B) block copolymer(s) composed of: (B1) polyalkylene ether block(s); and (B2) polylactate block(s); where $(B)/(I) = 0.3-50$ wt. %.

The composition may be used as moldings of (I) include fibers, fabrics, knits, nonwoven fabrics, papers, nets, ropes, films, sheets, plates, rods, tubes, containers.

The composition gives moldings with good antistatic properties, improved flexibility, impact resistance, good appearance and transparency.

Again, as noted above, the use of the film in the art of record each employ the various

film(s) in similar or the same manner, i.e. in packaging material, tape or base material for an object or bag etc.. Thus, it is a reasonable expectation that such parameters would be obvious to the skilled artisan to select the molecular weights, crystallinity, tensile strength etc. and the amounts and ranges as those claimed. Thus, it would have been obvious to one of ordinary skill in the art to employ the film(s) as noted without a showing of unexpected results via an affidavit or further proof via a back to back comparison since such films have been disclosed to be used in the same manner as claimed.

Consequently, the claimed invention cannot be deemed as unobvious and accordingly is unpatentable.

Correspondence

Please note that the cited U.S. patents and patent application publications are available for download via the Office's PAIR. As an alternate source, all U.S. patents and patent application publications are available on the USPTO web site (www.uspto.gov <<http://www.uspto.gov>>), from the Office of Public Records and from commercial sources. Applicants may be referred to the Electronic Business Center (EBC) at <<http://www.uspto.gov/ebc/index.html>> or 1-866-217-9197.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Terressa Boykin whose telephone number is 571 272-1069. The examiner can normally be reached on Monday through Friday from 6:30am to 3:00pm.

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The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. The general information number for listings of personnel is (571-272-1700).

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

tmb


Examiner Terressa Boykin
Primary Examiner
Art Unit 1711